In the claims:

Amend claims 1, 6 and 7.

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1. (Currently amended) An apparatus for encoding data in accordance with a fire code G (x) = P (x) (1 + x ^{c}), where P (x) is an irreducible polynomial of the degree m, characterized in that the value for C can be freely set within predetermined limits and changed so that a code with variable redundancy can be obtained, and the value for C or the values b and d for the error correction and detection properties of the incorporated redundancy are adaptable to the respective quality of the transmission channel, and the apparatus is formed so that it can implement a plurality of different fire codes, and the different fire codes are selected for coding of input data in dependence on a control value, to produce the code with variable redundancy.

2. (Original claim) The apparatus according to claim 1, characterized in that the upper limit for C is predetermined by a maximal value and that the encoding apparatus has storage elements (3) and modulo 2 adders (4) whose number corresponds to the maximal number, and that switches (31, 52,...53, 54) are provided, by means of which the storage

places (3) and modulo 2 adders (4) can connected together into an encoder according to the selected value C.

3. (Original claim) A decoder for decoding data in accordance with a fire code $G(x) = P(x)(1 + x^c)$, where P (x) is an irreducible polynomial of the degree m, characterized in that the value for C can be freely set within predetermined limits.

4. (Original claim) The decoder according to claim 3, characterized in that a disk register (103) is provided, wherein the length of the disk register (103) can be set as a function of the value for C.

5. (Original claim) The decoder according to claim 4, characterized in that a second disk register (102) is provided, whose length can be set to a value B, where in all cases, B is less than M and where B indicates the maximal number of correctable bit errors.

6. (Currently amended) A method for encoding data in accordance with a fire code $G(x) = P(x)(1 + x^c)$, where P (x) is an irreducible polynomial of the degree m, characterized int hat the value for C can be freely set within predetermined limits and changed so that a code with

variable redundancy can be obtained, and the value for C or the values b and d for the error correction and detection properties of the incorporated redundancy are adaptable to the respective quality of the transmission channel, so that with only fixed values for a data rate for the transmission channel and variable data rate of a source, transmission reliability can be increased by selecting coding and corresponding polynomials in dependence on different situation.

7. (Currently amended) A method for decoding data in accordance with a fire code $G(x) = P(x)(1+x^c)$, where P (x) is an irreducible polynomial of the degree m, characterized in that the value for C can be freely set within predetermined limits and changed so that a code with variable redundancy can be obtained, and the value for C or the values b and d for the error correction and detection properties of the incorporated redundancy are adaptable to the respective quality of the transmission channel, so that with only fixed values for a data rate for the transmission channel and variable data rate of a source, transmission reliability can be increased by selecting codings and corresponding polynomials independence on different situation.

8. (Original claim) The method according to claim 7, characterized in that the values b and d (according to the specification for the error correction and detection properties o the incorporated redundancy can be freely set within predetermined limits and in accordance with d=c+1-b.

Claim 9 cancelled.

10. (Previously added) An apparatus as defined in claim 1, wherein the values b and d are adaptable to a bit error rate of the transmission channel.

11. (Previously added) A method as defined in claim 6, wherein the values b and d are adaptable to a bit error rate of the transmission channel.

12. (Previously added) A method as defined in claim 7, wherein the values b and d are adaptable to a bit error rate of the transmission channel.